UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JUL 15 2003

REPLY TO THE ATTENTION OF
S-6J

Mr. Thad Beard
City Manager
City of Otsego
City Hall
117 East Orleans Street
Otsego, MI 49078

Re: Issues Associated with Dam Ownership at the Allied Paper/Portage Creek/Kalamazoo River Superfund Site

Dear Mr. Beard:

The purpose of this letter is to respond to your letter of June 17, 2003 regarding repair work and future dismantling of the Otsego City dam. I also want to update you generally on the status of cleanup efforts for the Kalamazoo River, Operable Unit #5 of the Allied Paper/Portage Creek/Kalamazoo River Superfund Site (the "Site"), and address various issues associated with the dams located within the Kalamazoo River. The United States Environmental Protection Agency ("U.S. EPA" or the "Agency") is aware that the City of Otsego is the owner and operator of one of the dams located at the Site, and may have questions and concerns about the connection between the Superfund cleanup process and the fate of its dam.

As you may already know, shortly after the Site was listed on the National Priorities List, U.S. EPA and the Michigan Department of Natural Resources ("MDNR") agreed that the Site would be designated a "non-Fund financed, state enforcement lead site" for purposes of the Remedial Investigation/Feasibility Study ("RI/FS"). This designation signified, among other things, that the investigation about the nature and extent of hazardous contamination at the Site would occur under the primary direction of MDNR (and subsequently the Michigan Department of Environmental Quality or "MDEQ") pursuant to what is now Part 201 of the Natural Resources and Environmental Protection Act, 1994 PA 451. U.S. EPA assumed a support agency role for the Site, providing review and comments on major documents.

Shortly after receiving a copy of the draft RI/FS report for the Kalamazoo River, U.S. EPA determined that, before any decision could be made regarding remedial action on the Kalamazoo River, additional RI/FS work needed to be done. Most importantly, the Agency believed that the potentially responsible parties ("PRPs") had not conducted sufficient sampling to determine whether areas of higher concentration of polychlorinated biphenyls ("PCBs") existed in the in-

stream sediments, exposed former sediments (sometimes called the "impoundments"), and floodplain soils. The identification of such "hot spots," if they exist, can help the Agency focus its cleanup efforts on those areas of contamination which pose the greatest threat to human health and the environment. In May 2001, U.S. EPA's Fully Integrated Environmental Location Decision Support ("FIELDS") group collected and analyzed a large number of samples in the sediments and floodplain soils in the first two "reaches" of the Kalamazoo River to help identify hot spot areas.

In February of 2002, primarily because the RI/FS work at the Site conducted by the PRPs was coming to an end, U.S. EPA and MDEQ agreed that U.S. EPA should assume the enforcement lead for various operable units of the Site, including the Kalamazoo River. Since the date of the agreement, response actions for the Kalamazoo River have proceeded under the authorities granted to the federal and state governments under the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9601 *et seq.* ("CERCLA").

U.S. EPA announced its cleanup approach for the Kalamazoo River in August 2002. The Agency proposed to first eliminate on-going sources of PCB contamination (including exposed paper wastes along river banks within the impoundments), and then address in-stream sediments. Cleanup would begin upstream and proceed downstream on a reach-by-reach or dam-to-dam basis. The Agency further announced that it would first require cleanup of the Phase I portion of the River (Morrow Pond Dam to Lake Allegan), followed by the Phase II portion (Lake Allegan to Lake Michigan). This phased approach to (1) reducing risk and (2) mitigating the threat of re-contamination is consistent with the National Research Council's report entitled "A Risk Management Strategy for PCB-Contaminated Sediments," as well as U.S. EPA national guidance entitled "Principles for Management of Contaminated Sediment Risks at Hazardous Waste Sites."

Region 5 committed to issuing a Proposed Plan for the first two impoundments on the Kalamazoo River -- the Plainwell and Otsego City impoundments -- by the end of Summer 2003. In order to meet that commitment, for the past year the Agency has supplemented the RI/FS work conducted by the PRPs and FIELDS. This RI/FS work included, but was not limited to, the identification of additional hot spots, review of the human health and ecological risk assessments for the Site, and analysis of the interface between groundwater and surface water. Additionally, U.S. EPA contracted with the United States Geological Survey ("USGS") to study what would happen if the dams on the River failed. The USGS study will quantify the volume of sediment that would be transported downstream and determine which areas of the River are likely to erode in the event of dam failure. The Agency is also finalizing an alternatives array that will describe and analyze various cleanup options for these first two impoundments. These cleanup options will be compared under the nine criteria provided by the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"). Eventually, and only following public input and comment, U.S. EPA will select one of the alternatives as the remedial action for the Plainwell and Otsego City impoundments. One of the alternatives currently under consideration involves dam removal.

U.S. EPA has been aware for some time that MDEQ and MDNR would strongly prefer that any remedy for the Kalamazoo River include removal of the three state-owned dams. The State would like to see as much of the Kalamazoo River as possible returned to an unimpeded, "run of river" watercourse. The Agency is also aware that some of the cities owning dams along the River would like to dismantle their dams for a variety of reasons.

The Agency asks for your patience as it investigates and evaluates whether removal of one or more of the dams is necessary to ensure protection of human health and the environment. The Agency also needs to investigate the potential effects of dam removal on the migration of PCBs at the Site. The Agency is concerned that dismantling the dams may cause significant migration of contaminated sediments downstream and into the floodplains of the Kalamazoo River. Areas of the Site that previously had been clean may become contaminated, and long-buried PCBs may be resuspended and become bioavailable. In short, where the Kalamazoo River would travel in the event the dams were dismantled (short term and long term), what measures could be taken to mitigate the effect of dam removal on contaminated sediments, and the costs associated with such measures, need to be seriously considered.

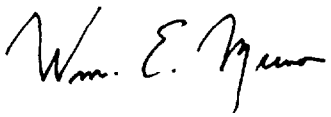
I also want to make you aware that, after U.S. EPA initiates an RI/FS under CERCLA, owners and operators of a facility may not undertake remedial action without Agency authorization. *See* 42 U.S.C. § 9622(e)(6). Under CERCLA, as the owner/operator of a dam at the Site, you are the owner/operator of a portion of the "facility." The Agency would consider repair, dismantling, or any other significant work on the dams within the Kalamazoo River to be "remedial action" requiring Agency approval. If you take actions at your dam without U.S. EPA approval, and those actions result in the release or threat of a release of hazardous substances, the Agency will need to evaluate whether the City's actions have jeopardized any "innocent landowner" defense the City may have to owner/operator liability under CERCLA. If you have plans to repair, dismantle, or take any other significant action with regard to your dam, you need to contact the Agency's Remedial Project Manager, Shari Kolak, as soon as possible. Similarly, if you need the Agency's help in securing PRP assistance with maintaining your dam as an interim measure at the Site, please contact either Ms. Kolak or Eileen Furey, the Agency's attorney for the Site. I have enclosed a Q & A sheet that responds to other questions you may have about the fate of the dams on the Kalamazoo River.

In closing, I would like to emphasize two important points. The Agency's mission, as established by Congress, is to select a remedy for the Kalamazoo River that reduces risk to a level that protects human health and the environment. Region 5 has not yet selected any remedy for the Plainwell and Otsego impoundments, and I assure you that the Agency is seriously considering, under the parameters established by CERCLA and the NCP, whether dam removal is necessary to ensure protectiveness in these first two reaches of the Kalamazoo River. Finally, it is important to recall that restoration of natural resources is not part of U.S. EPA's mission. Rather, CERCLA provides a process, entirely distinct from remedy selection, for recovering costs associated with the destruction or loss of natural resources of the states and the country. CERCLA commissions the natural resource damage trustees with the important task of

recovering these damages. It may be that, if U.S. EPA determines that dam removal is not necessary to ensure protectiveness at the Site, and that another protective and more cost-effective remedy is available under the NCP's criteria, then the natural resource damage trustees may be able to secure the costs associated with dam removal as part of their natural resource damage claim.

If you have any additional questions or concerns, Ms. Kolak can be reached at (312) 886-6151 and Ms. Furey at (312) 886-7950. Thank you for your immediate attention to this matter.

Sincerely yours,



William E. Muno, Director
Superfund Division

Enclosure

cc: Scott Smith, Esq.

Questions and Answers about the Kalamazoo River Dams

1. Has EPA made any decision yet with regard to whether the dams should stay in place or not?

No. EPA is currently creating a list of remedial alternatives for the first two exposed sediment impoundments on the Kalamazoo River (Plainwell and Otsego City). The remedy for these impoundments eventually will be selected from this list, but this process is just now getting started. At least one of the alternatives the Agency is looking at for these impoundments involves the removal of the Plainwell and Otsego City dams. After the alternative array is complete, EPA will evaluate the alternatives according to the Superfund remedy selection process provided in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

2. How does dam removal fit into Superfund's remedy selection process?

The issue of dam removal is important to many of the criteria EPA uses in evaluating what remedy to choose for a Superfund site.

The NCP provides nine criteria that EPA uses to evaluate alternative approaches to a remedy at a Superfund site. The first two of these criteria are the most important – they are called "threshold criteria" because every Superfund remedy must meet them in order to be even eligible for selection. These first two criteria are: (1) adequate protection of human health and the environment from unacceptable risks associated with hazardous substances; and (2) achievement of ARARS (applicable or "appropriate and relevant" legal requirements). Of course, dam removal comes up first in EPA's evaluation of #1 – is dam removal needed to ensure adequate protection of human health and the environment? EPA is looking at this issue very carefully.

The next five criteria are the "primary balancing criteria." This means that, after the threshold criteria are met, these are the next most important to EPA's comparison of alternative remedies. They are: (1) long-term effectiveness and permanence; (2) reduction of toxicity, mobility or volume through treatment; (3) short-term effectiveness; (4) implementability; and (5) cost. The issue of dam removal is important to #1, #3, #4 and #5 of these "balancing" criteria. EPA must evaluate whether the dams must be removed in order to ensure long-term effectiveness and permanence of the remedy for the River. EPA must evaluate the impacts of dam and sediment removal on people and the environment, and assess the difficulty of removing the dams. EPA must also determine what are the costs associated with dam removal. The NCP requires all remedies to be "cost-effective," which means that the costs are proportional to the remedy's overall effectiveness. As discussed at greater length below, EPA is looking at these issues also.

Finally, the last two NCP criteria, called "modifying criteria," are: (1) state acceptance; and (2) community acceptance. They are called "modifying criteria" because often EPA is not able to thoroughly evaluate these criteria until after a Proposed Plan has been issued. The NCP provides that EPA must assess and consider the extent to which a remedy will meet with state and/or community acceptance. Dam removal is important to these modifying criteria also. EPA

is well-aware that, to date, the state and many people in the community have stated that they are not in favor of any remedy for the River that does not require dam removal. But EPA cannot, at this stage in the decisionmaking process, assume that it knows for certain what the state and community want for these first two impoundments, since no remedy has been proposed and neither the state nor the public yet know the details of any proposed remedy. In other words, EPA has to wait to evaluate state and community acceptance until all the public has all relevant information in front of it.

3. What has EPA done with regard to dams at other sediment sites?

In some cases, EPA has required the dams to remain in place; at other sites EPA has required the dams removed. Each decision is site-specific, and turns primarily on what is necessary to ensure protectiveness of human health and the environment based upon a thorough evaluation of the nine criteria discussed above.

4. Can EPA issue a ROD, and implement a remedy, without State approval?

The concurrence or approval of the State is not a prerequisite to EPA's selection of a remedy in a ROD. See 40 C.F.R. § 515(e)(2)(ii). If Superfund monies are to be used to pay for a remedy, the state in which the site is located has to provide certain assurances about cost-sharing and long-term O&M before work can begin. If Superfund monies are used, a state usually has to fund 10% of the remedy and also pay for long-term operation and maintenance. If a Superfund facility was publicly operated at the time of disposal, the state has to agree to pay at least 50% of the cost of the remedy. But if the PRPs conduct or pay for the work, then state assurances about cost-sharing are not necessary, and work can proceed without state approval. See 40 C.F.R. § 300.510.

5. If EPA makes a decision that the dams should stay in place, is there anything the State can do then to change EPA's decision?

Yes. Under the NCP the State can ask EPA to make changes to a ROD on the basis that such changes are necessary to ensure protectiveness, etc. If EPA agrees, EPA will modify the ROD. But if EPA believes that the changes proposed by the State are not necessary under the NCP criteria, but rather represent an "enhancement" of the remedy (i.e. go above and beyond what the NCP requires), then EPA can agree to modify the ROD if the state agrees to pay for the entire additional cost associated with the changes the State wants. See 40 C.F.R. § 300.515(f).

6. Is there any other way besides through the Superfund decisionmaking process that the State can deal with the dam removal issue?

Yes. The State and the other natural resource damage Trustees (e.g. Department Of Interior) can make a claim for damages to the natural resources of the State as a result of the PCB-contamination in the Kalamazoo River. The Trustees are in the process of assessing such

damages now. Such a claim often results in substantial payments to the Trustees, which can then be used for natural restoration projects at affected sites. Dam removal could be one of these projects.

7. What is EPA doing to evaluate the dam issues?

Besides our internal evaluation, EPA is funding a study by the United States Geological Survey (USGS) to study what would happen if the three state-owned dams were dismantled. USGS is evaluating where the sediment would erode and aggrade within the current channel if the dams were to catastrophically fail and how much sediment would become mobile. USGS has conducted volume estimates of the sediments behind three of the state-owned dams as well as the Otsego City dam. Additionally, the USGS has implemented a program of collecting suspended and bedload sediment data and has maintained discharge measurements collected at two stream gages within the study area.

8. What questions <u>won't</u> the USGS study resolve?

The USGS study will not answer the question of what effect dismantling of the three state-owned dams may have on Allegan Dam. The USGS study will also not answer the question of what happens to Lake Allegan, which already has sedimentation issues, in the event upstream dams are removed. The USGS study will also not indicate <u>where</u> EPA could dispose of what could be significant quantities of sediment removed from the River, or the cost of such removal and disposal. Finally, the USGS study will not estimate how long dredging, excavation and disposal of floodplain soils and sediments would take before the dams could be removed. EPA currently believes that such dredging and excavation would take several years.

9. When is the USGS study due to be completed?

EPA expects a draft from the USGS study in September 2003, which will include a preliminary analysis of the results of the geomorphology investigation, and a final estimate of the volume of sediments behind the Otsego City dam. The final geomorphology report is not due until September 2004.

10. What if the USGS study shows that dismantling the dams would improve long-term effectiveness of the River remedy and not cost significantly more than leaving the dams in place?

If the USGS study indicates that dismantling the dam would be a cost-effective remedy, and that the other eight criteria of the NCP would be satisfied (e.g. implementability, short-term effectiveness), then EPA's selected remedy may include dam removal. However, if EPA's remedy decision is made before all the USGS studies are completed, then EPA would revisit any remedy decision that had already been made for the River to see whether an amendment to that decision was justified.

11. Can EPA require that the dams stay in place? Can EPA leave any contaminated sediments in place if the State owns the property and wants them all removed?

EPA has made no decision yet with regard to whether the dams need to be removed or should stay in place. But legally, EPA can require, as part of the remedy selection process, that wastes stay on site, provided that any unacceptable risk to human health or the environment from those wastes has been addressed (e.g. a landfill cap). In fact, the NCP contains a bias against off-site land disposal of untreated waste. See 40 C.F.R. § 300.430(f)(1)(ii)(E). In other words, moving the waste from one place to another is not always the right thing to do. EPA can also require that the dams be repaired and maintained as part of the remedy for the site, to help ensure that the River remains in its current channel and does not meander into areas where erosion of high concentration PCB soils could occur.

12. If EPA requires the dams to remain in place, who will pay for the necessary repairs and long-term operation and maintenance of the dams?

The PRPs.

13. If EPA requires the dams to remain in place, does that mean PCB-contaminated floodplain soils and sediments will remain forever?

As noted above, EPA can only leave wastes in place if the risks from those wastes have been addressed. Any decision EPA makes with regard to the dams – whether to require them to stay or require that they be dismantled – will ensure that the floodplain soils and sediments with PCBs above, respectively, the ecological risk value and the human health risk value, will be either removed and disposed of properly, or will be actively remediated on-site (e.g. capped). The ecological risk range for floodplain soils is 6 to 8 ppm and for in-stream sediments is 0.5 to 0.6 ppm. The human health risk value for floodplain soils is 23 ppm.

14. If the State decides to just go out there and take down those dams, what happens then?

Under the Superfund law, the State can't just "go out there" and take the dams out. The state is an owner of a part of a Superfund site. The CERCLA statute provides that, once EPA has begun an RI/FS for an NPL site, then someone who owns part of the site needs EPA's approval to do any remedial work. EPA would consider dismantling the dams to be remedial work. See Section 122(e)(6) of CERCLA.

15. When EPA looks at the costs associated with dam removal, what exactly is it looking at?

Since the state-owned dams already are partially dismantled, the major costs associated with their removal are: (1) the cost of excavating and/or dredging sediments and floodplain soils that

would need to be removed prior to the dismantling; and (2) disposal of those sediments. Disposal is a key cost at all sediment sites. At some sediment sites (like the Fox), sediment disposal will take place via a pumping system to a storage location near the River, where the sediments will be dewatered and then, eventually, capped in place. At sites where no nearby property is available, or for some other reason sediments cannot be finally disposed of near the excavation/dredging area, the sediments must be dewatered and then trucked to a sometimes distant location. The cost of such dewatering and off-site trucking can be quite high, particularly if the volume of sediments is large.